



Integracides F and G: New tetracyclic triterpenoids from the endophytic fungus *Fusarium* sp.

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Abstract:

Two new tetracyclic triterpenoids: integracides F (1) and G (2) have been isolated from the endophytic fungus *Fusarium* sp. isolated from the roots of *Mentha longifolia* L. (Labiatae) growing in Saudi Arabia. Their structures were established by UV, IR, 1D (¹H and ¹³C), 2D (¹H-¹H COSY, HMQC, HMBC, and NOESY) NMR, and HRESIMS spectral data, in addition to comparison with literature data. The isolated compounds were evaluated for their anti-microbial, anti-malarial, anti-leishmanial, and cytotoxic activities. Compound 1 and 2 displayed potent cytotoxic activity towards BT-549 and SKOV-3 with IC₅₀ values of 1.97 and 0.16 mg/mL and 1.76 and 0.12 mg/mL, respectively compared to doxorubicin (IC₅₀ 1.61 and 0.095 mg/mL, respectively). Moreover, they exhibited significant anti-leishmanial activity towards *Leishmania donovani* with IC₅₀ values of 3.74 and 2.53 mg/mL, respectively and IC₉₀ values of 5.11 and 8.89 mg/mL, respectively.

Keywords:

Fusarium sp. Integracides Triterpenoids Anti-microbial Anti-malarial Anti-leishmanial Cytotoxic

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